SECTION 6 – COSTS AND FUNDING

A. *Cost Evaluations*

Like a "fit test" that provides information on spatial relationships (not design), a "cost evaluation" provides information on preliminary costs (not specific estimates). The information is drawn from current and projected construction costs, knowledge of the site conditions and phasing, and expertise in project management. The cost evaluations are comprised of four major parts:

Hard costs - the costs associated with the physical building of the site and structure, including materials and labor.

Soft Costs - the costs associated with design work, project management, inspections and testing throughout the entire construction period.

Contingency - an incremental percentage included to provide for unanticipated conditions or findings, resulting in change orders. The contingency factor is typically higher for renovations than for new construction.

Escalation - the annual rate at which the cost of construction materials and labor is expected to rise. This rate is applied to the estimated *hard costs* based on the start of construction and taking into account the duration of construction.

Below is a description of the cost drivers for the High School Project. The cost evaluations are preliminary; further analysis will proceed in collaboration with MSBA.

B. *Cost Drivers*

There are multiple factors which drive the cost of a major municipal building project. These have been considered and estimated while preparing the cost evaluations:

- **Local construction market** - The state of the local market plays a major role in the pricing of a project, depending largely on the overall construction economy and how busy is the public work portion of the market.
- **Global impact** – World market commodity prices such as steel, copper, oil and cement all impact on the cost of construction.
- **Site conditions** - Multiple aspects impact how difficult the site is to work with.
- **Design** - The shape, height, configuration and features of a building impact cost.
- **Materials/durability** - Materials are available in a wide range of cost and durability. For a structure to have a 50-year functional life, the High School will need durable materials that are good quality and economical.
- **Sustainability** - There is a wide range of Green strategies which vary in cost impact. The preliminary cost evaluations provide for a design and construction which meet the Mass CHPS level (*Massachusetts Collaborative for High Performance School, see Section 5, page 1*) at a minimum.

- **Start of Construction and Escalation** - Project costs increase as inflation and local conditions cause price pressure. For projects with long durations, these factors must be considered for projects of long duration.
- **Duration of Project/Phasing** - The duration of a project is dictated by the site constraints, the ongoing use of the building and the number of phases required to complete the work. Phasing involves multiple mobilizations, either deferring purchasing materials or storing of materials for subsequent phases. Increased duration and/or phases ultimately increase project costs.
- **Permitting process** - there are multiple local permits (Project of Significant Impact from the Planning Board and a Special Permit from the ZBA) required for a project of this magnitude. The more time required to obtain the necessary permits, the more costs will increase due to escalation.

Cost Evaluations for the options under review will be distributed as a separate hand-out on the first night of Town Meeting and can be inserted here.

C. *Cost Management*

The SBC and the PBC are committed to managing the cost of the High School Building Project in order to maximize the value of every dollar spent. The objective is to invest taxpayers' money in a well-designed and efficient educational facility which will serve the town well for at least 50 years. It is our commitment to set realistic cost expectations and manage to them. The SBC and PBC have adopted the following plans for cost containment:

1. Critical Success Elements

a. <u>During Design Phase</u>

1. Cost driver management

Identify cost drivers and methods for their management in design and construction; assess and define high risk areas. Key cost drivers are:

- Program: overall size, net-to-gross square footage efficiency
- Design: articulation of footprint, wall-area ratio, volume, quality of materials, and historic considerations
- Phasing and scheduling
- Site and environmental considerations, including asbestos abatement
- Market conditions
- Risk assessment: site, permitting, escalation, phasing, technical feasibility

2. Value engineering

- Rationalize space: consider alternatives, innovations and economies
- Rationalize material choices:
  a) standardize of materials, structures and components
  b) balance aesthetic with economics

3. Construction Manager at Risk

Massachusetts has recently instituted an alternative procurement process called *Construction Management at Risk*.[1] This process is commonly used in the private sector by major institutional clients in both the academic and medical sector. It results in the Owner, the Designer, and the Construction Manager (CM) working together as a team to deliver a quality project. The PBC and SBC are analyzing the *Construction Management at Risk* process for the High School Building Project. The SBC will request funds for a Construction Manager in the FY08 ATM appropriation for assistance during the schematic design preparation for the estimates that will be presented to the MSBA.

[1] Traditionally, contractors have been chosen on the basis of competitive lump sum bids under the design/bid/build process. Under the *Construction Management at Risk* process, a Construction Manager (CM) is chosen early in the design process on the basis of qualifications. One of the most important criteria for choice is the proposed staff of the CM. A proper number and quality staff is critical to getting a quality project completed on schedule and within budget. A fee for overhead and profit and CM General Conditions is then negotiated. This fee is fixed and is the CM's profit for the project. Therefore, every action he takes from there is to get the owner the best project for the best value. The CM has nothing to gain by using low-ball subcontractors or cutting corners, which can occur with the traditional method. The CM works with the town during the pre-construction process assisting and advising overall budgeting and value engineering, logistics, scheduling and phasing, and recommendations on subcontractors. Portions of every public project are bid to sub-contractors ("subs") under the filed sub bid laws. Under this law subs bid directly to the state bidding authority, not to the general contractors (GC). The balance of public projects is bid by the GC's. Under *Construction Management at Risk*, the CM establishes a Prequalification Process for all subcontractors prior to allowing them to bid. Subs who do not meet the criteria of the prequalification process are not permitted to bid. This can prevent subs that are not large enough or financially stable enough, or experienced in a project type to bid. This should result in a better quality bidding process and a better job.

4. *Decision impact*
   Monitor the effect of design and technical decisions on budget
   - Manage for value of onsite vs. offsite construction
   - Staging efficiencies
   - Orientation and siting efficiencies (position/design of building to minimize phasing)

5. *Life-cycle cost analyses and energy modeling*
   - Goal is to achieve *Mass-CHPS* points (Massachusetts Collaborative for High Performance Schools)
   - Design to a minimum of 30 points, then evaluate the cost/benefit on initial cost and operating cost of going beyond 30 points
   - Impact on operating costs (maintenance, custodial, replacement cycles)

6. *Accurate cost estimation*
   - Employ detailed cost estimation methodology with appropriate contingencies according to the level of detailed information, including parallel estimates
   - Prepare written analysis of market conditions and expectations
   - Detail expected points of variability at level of systems and sub-systems
   - Detail project schedule and impact on cost

7. *Expedite permitting process*
   - Anticipate permitting issues
   - Stay on schedule for start of construction

8. *Learn from other High School projects*
   - Manchester Essex (effective cost management)
   - Newton North (expensive design , unanticipated cost escalation, flawed decision process, initial plans generated under prior SBA regulations)
   - Whitman-Hanson (imbalance between capital investment and long-term operating sustainability)
   - Quincy (similar size and site; recent bids)

b. <u>During Construction</u>

1. *Minimize duration and phasing in order to:*
   - reduce cost escalation risk
   - reduce need for enrollment-driven modular classrooms
   - reduce need for alternatives to accommodate current students and faculty (costs associated with having extracurricular programs offsite, alternative parking)
2. *Balance cost management with minimizing impact on current students*

c. <u>Post-Construction</u>: Commissioning, Training, Maintenance

1. Comprehensive commissioning process to assure that all systems are operating as specified
2. Comprehensive compilation of as-built drawings and operation and maintenance manuals for use to design the on-going maintenance program for the completed project
3. Written confirmation of warranties to be honored for all work per the specifications
4. Detailed and comprehensive project closeout
5. Efficient management of punch list post-construction

2. Methods of Implementation

The PBC and SBC will focus on the critical success elements and oversee cost containment efforts and focus on the critical success factors. Each major decision point will be accompanied documented outlining the anticipated costs associated with the decision. Major decision points will include, but are not limited to, the following:

- Level of "greenness"
- Exterior materials (brick, masonry and/or stonework)
- Window/glass type and dimension
- Interior finish (flooring, trim, lighting)
- Renovation/replacement/transfer of historical elements
- Technology standards
- HVAC system design
- Lighting fixtures and controls
- Emergency power design
- Landscape and hard-scape choices

D. *Project Funding*

It is anticipated that funding for the High School Building Project will be achieved through the following:

- Long-term debt financing, upon voter approval of a *debt exclusion*
- MSBA reimbursement
- Other funding sources

1. Long-term Debt Financing

Debt financing will be sought for the balance of project costs not funded through either reimbursement or other funding sources. However, state regulations dictate that the debt exclusion ballot question must provide for the voters to approve the full project cost. The Town will have entered into an agreement with the MSBA prior to the Special Town Meeting and to debt exclusion action. Therefore, there will be a definitive tax impact analysis, reflecting reimbursements and other known funding sources, prior to the town-wide vote.

Contingent upon MSBA approval of the project, there is a reasonable level of confidence in a 40% reimbursement rate. There is less clarity about the specific portion of the project cost that will be eligible for this reimbursement rate. Thus, this preliminary tax impact analysis provides an estimated range for the *net* reimbursement.

High School Financing Scenarios

Assumptions:	
Project cost	$155,000,000
Interest rate	4.5%
Amortization period (yrs.)	25
Annual debt service without reimbursement	$10,453,049
Median home value	$832,000
Total assessed value	$9,175,647,000

	Annual Tax Bill Impact		
Assessed Value	**Without Reimbursement**	**With 25% Reimbursement**	**With 40% Reimbursement**
$600,000	$684	$513	$410
$832,000	$948	$711	$569
$1,500,000	$1,709	$1,282	$1,025

Please note: In order to demonstrate tax impact scenarios, the Project cost is an estimated projection based on general assumptions (physical building plus Seaver Street acquisition costs) at the time this information goes to press. As such, they provide a sense of magnitude for comparison purposes, not a definitive analysis.

2. MSBA Reimbursement

The SBC is anticipating a project which meets with MSBA approval and therefore eligible to receive reimbursement in the amount of 40% of eligible project costs. Please see **Section 7** for details.

3. <u>Other Funding Sources</u>

The SBC will pursue opportunities for additional funding sources to offset project costs or enable specific design features.

- *Municipal Light Plant* – requested to provide Energy Modeling Services to project long-term cost impact associated with project decisions.
- *Community Preservation Committee* – requested to provide opportunity for funding historical preservation and/or restoration.
- *Friends of Wellesley High School* – plant to form a committee to solicit and collect private funds for project purposes. **Article 26** at this Town Meeting provides for a town-wide policy for the *naming* of Town assets.
- *MSBA match* –MSBA regulations have a provision for matching grants: 1) to match private funds raised. At the discretion of the MSBA, funds may be allocated at a rate of 0.5% for every 1.0% of project costs raised for the capital construction of the facility from non-public sources, which may include private fundraising; and 2) to match funds appropriated by a Town into a *Facility Maintenance Trust Fund* (a 1% match). **Article 18** at this Town meeting provides for the creation of a *Facility Maintenance Trust Fund*.